

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-57 (Canceled).

58. (Currently Amended) A method of separating groups of nanostructure-containing materials containing at least one of nanotubes and nanowires with different electronic properties into separate groups wherein each group contains materials with similar electronic properties, the method comprising:

- (i) forming a mixture comprising the groups of nanostructure-containing suspending the materials to be separated and in a liquid medium;
- (ii) introducing a plurality of electrodes into the mixture suspension, the plurality of electrodes including at least a first electrode and a second electrode, the first electrode having a different geometry from the second electrode;
- (iii) establishing an asymmetrical alternating-current (AC) electrical field within the mixture between the first electrode and the second electrode;
- (iv) adjusting the frequency of the AC field to a suitable value to cause polarizing the groups of nanostructure-containing materials in the mixture, thereby causing at least a first group of materials with one type of electronic properties to migrate to a the first electrode and causing a second group of materials with a different type of electronic properties to migrate to a the second electrode; and

(v) recovering at least the first group from the liquid medium at the first electrode.

59. (Original) The method of claim 58, wherein step (v) further comprises recovering the second group from the liquid medium at the second electrode.

60. (Original) The method of claim 58, wherein the first group comprises conductors and the second group comprises semiconductors.

61. (Currently Amended) The method of claim 60, wherein the conductors comprise metallic or conductive carbon nanotubes and the semiconductors comprise semiconducting carbon nanotubes.

62. (Original) The method of claim 58, wherein the liquid medium comprises water.

Claims 63-71 (Canceled).

72. (New) The method of claim 58, further comprising adjusting the dielectric constant of the liquid medium.

73. (New) The method of claim 58, wherein the materials to be separated comprise a mixture of metallic and semiconducting carbon nanotubes.

74. (New) The method of claim 58, wherein the first electrode has a sharp protrusion and the second electrode has a planar geometry.